No. 200300204

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Florida Agricultural Experiment Station

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE , OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. IN THE UNITED STATES SEED OF THIS VARIETY (1) SHALL BE LABELED BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS SPECIFIED BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

PEANUT

'Carver'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this twenty-fifth day of August, in the year two thousand and five.

Attest:

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Secretary of Agriculture

REPRODUCE LOCALLY. *Include form number and date on all reproductions.* FORM APPROVED - OMB NO. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY DIVISION - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) *(as it is to appear on the Certificate)*
Florida Agricultural Experiment Station

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER
UF97102

3. VARIETY NAME
Carver

4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)*
Office of Dean for Research
1022 McCarty Hall, University of Florida
P. O. Box 110200
Gainesville, FL 32611-0200

5. TELEPHONE *(include area code)*
352-392-1784

6. FAX *(include area code)*
352-392-4965

FOR OFFICIAL USE ONLY

PVPO NUMBER
200300204

FILING DATE
March 28, 2003

7. GENUS AND SPECIES NAME
Arachis hypogaea L.

8. FAMILY NAME *(Botanical)*
Leguminoseae

9. CROP KIND NAME *(Common name)*
Peanut (Groundnut)

FEES RECEIVED
FILING AND EXAMINATION FEE:
$ 3,652.00
DATE
March 28, 2003
CERTIFICATION FEE:
$ 432 -
DATE
June 28, 2005

10. IF THE APPLICANT NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION *(corporation, partnership, association, etc.)* *(Common name)*
Florida Agricultural Experiment Station

11. IF INCORPORATED, GIVE STATE OF INCORPORATION
NA

12. DATE OF INCORPORATION
NA

13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS
Dr. D. W. Gorbet
North Florida Research and Education Center
3925 Highway 71
Marianna, FL 32446

14. TELEPHONE *(include area code)*

15. FAX *(include area code)*

16. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED *(Follow instructions on reverse)*

a. ☒ Exhibit A. Origin and Breeding History of the Variety
b. ☒ Exhibit B. Statement of Distinctness
c. ☒ Exhibit C. Objective Description of the Variety
d. ☒ Exhibit D. Additional Description of the Variety *(Optional)*
e. ☒ Exhibit E. Statement of the Basis of the Applicant's Ownership
f. ☒ Voucher Sample *(2,500 viable untreated seeds or, for tuber propagated varieties verification that tissue culture will be deposited and maintained in an approved public repository)*
g. ☒ Filing and Examination Fee ($2,450), made payable to "Treasurer of the United States" *(Mail to PVPO)*

17. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY, AS A CLASS OF CERTIFIED SEED? *(See Section 83(a) of the Plant Variety Protection Act)*
☒ YES *(If "yes," answer items 18 and 19 below)* ☐ NO *(If "no," go to item 20)*

18. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?
☒ YES ☐ NO

19. IF "YES" TO ITEM 18, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?
☒ FOUNDATION ☒ REGISTERED ☒ CERTIFIED

20. HAS THE VARIETY OR A HYBRID PRODUCED FROM THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKETED IN THE U.S. OR OTHER COUNTRIES?
☒ YES *(If "yes," give names of countries and dates)* ☐ NO
USA, May 2002

21. The applicant(s) declare that a viable sample of basic seed of the variety will be furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.

The undersigned applicant(s) is(are) the owner(s) of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Applicant(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF APPLICANT *(Owner(s))*		SIGNATURE OF APPLICANT *(Owner(s))*	
D. W. Gorbet			
NAME *(Please print or type)*		NAME *(Please print or type)*	
D. W. Gorbet		Richard L. Jones	
CAPACITY OR TITLE	DATE	CAPACITY OR TITLE	DATE
Professor/Breeder	2/21/03	Dean for Research	3/12/03

STD-470 (03-96) *(Previous editions are to be destroyed)* *(See reverse for instructions and information collection burden statement)*

REPRODUCE LOCALLY. *Include form number and date on all reproductions*

Form Approved - OMB No. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE
(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF OWNER
Florida Agricultural Experiment Station
~~University of Florida, IFAS~~
RAO 5/6/05

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME
UF97102

3. VARIETY NAME
Carver

4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)*
Office of Dean for Research
1022 McCarty Hall, University of Florida
P. O. Box 110200
Gainesville, FL 32611-0200

5. TELEPHONE *(include area code)*
352-392-1784

6. FAX *(include area code)*
352-392-4965

FOR OFFICIAL USE ONLY

PVPO NUMBER

FILING DATE

7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION *(corporation, partnership, association, etc.)*
University Ag. Expt. Stn. (Public)

8. IF INCORPORATED, GIVE STATE OF INCORPORATION
NA

9. DATE OF INCORPORATION
NA

10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. *(First person listed will receive all papers)*
Dr. Daniel W. Gorbet
North Florida Research and Education Center
3925 Highway 71
Marianna, FL 32446

FEES RECEIVED
FILING AND EXAMINATION FEES: $ DATE
CERTIFICATION FEE: $ DATE

11. TELEPHONE *(Include area code)*
850-482-9956

12. FAX *(Include area code)*
850-482-9917

13. E-MAIL
dgorbet@mail.ifas.ufl.edu

14. CROP KIND *(Common Name)*
Peanut

15. GENUS AND SPECIES NAME OF CROP
Arachis hypogaea L.

16. FAMILY NAME *(Botanical)*
Leguminoseae

17. IS THE VARIETY A FIRST GENERATION HYBRID?
☐ YES ☒ NO

18. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse)
- a. ☒ Exhibit A. Origin and Breeding History of the Variety
- b. ☒ Exhibit B. Statement of Distinctness
- c. ☒ Exhibit C. Objective Description of Variety
- d. ☒ Exhibit D. Additional Description of the Variety *(Optional)*
- e. ☒ Exhibit E. Statement of the Basis of the Owner's Ownership
- f. ☒ Voucher Sample *(2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository)*
- g. ☒ Filing and Examination Fee ($3,652), made payable to "Treasurer of the United States" *(Mail to the Plant Variety Protection Office)*

19. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? *See Section 83(a) of the Plant Variety Protection Act)*
☒ YES *(If "yes", answer items 20 and 21 below)* ☐ NO *(If "no", go to item 22)*

20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES? ☒ YES ☐ NO
IF YES, WHICH CLASSES? ☒ FOUNDATION ☒ REGISTERED ☒ CERTIFIED

21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? ☒ YES ☐ NO
IF YES, SPECIFY THE NUMBER 1,2,3, etc. FOR EACH CLASS.
1 FOUNDATION 1 REGISTERED 1 CERTIFIED
(If additional explanation is necessary, please use the space indicated on the reverse.)

22. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES?
☒ YES May 2002 ☐ NO
IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. *(Please use space indicated on reverse.)*

23. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT *(PLANT BREEDER'S RIGHT OR PATENT)*?
☐ YES ☒ NO
IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. *(Please use space indicated on reverse.)*

24. The owners declare that a viable sample of basic seed of the variety has been furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.

The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Owner(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF OWNER
Daniel W. Gorbet

NAME *(Please print or type)*
Daniel W. Gorbet

CAPACITY OR TITLE
Professor/Breeder

DATE
April 11, 2003

SIGNATURE OF OWNER

NAME *(Please print or type)*
Richard L. Jones

CAPACITY OR TITLE
Dean for Research

DATE
4/23/03

ST-470 (02-10-2003) designed by the Plant Variety Protection Office using Word 2000. Replaces former versions of ST-470, which are obsolete.

(See reverse for instructions and information collection burden statement)

INSTRUCTIONS

GENERAL: To be effectively filed with the Plant Variety Protection Office (PVPO), **ALL** of the following items must be **received** in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to reproduce the variety, or for tuber reproduced varieties verification that a viable *(in the sense that will reproduce an entire plant)* tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for $3,652 ($432 filing fee and $3,220 examination fee), payable to "Treasurer of the United States" *(See Section 97.6 of the Regulations and Rules of Practice.)* Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfiled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 401, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of $432 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

Plant Variety Protection Office
Telephone: (301) 504-5518
FAX: (301) 504-5291
Homepage: http://www.ams.usda.gov/science/pvpo/pvp.htm

ITEM

18a. Give:
(1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method;
(2) the details of subsequent stages of selection and multiplication;
(3) evidence of uniformity and stability; and
(4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified

18b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:

(1) identify these varieties and state all differences objectively;
(2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and
(3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.

18c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.

18d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, *etc.*

18e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.

19. If "Yes" is specified *(seed of this variety be sold by variety name only, as a class of certified seed)*, the applicant **MAY NOT** reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. *(See Regulations and Rules of Practice, Section 97.103).*

22. *See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.*

23. *See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.*

21. CONTINUED FROM FRONT *(Please provide a statement as to the limitation and sequence of generations that may be certified.)*

As noted (Breeder, Foundation, Registered, Certified (one year each).

22. CONTINUED FROM FRONT *(Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)*

May 2002 (Foundation)

23. CONTINUED FROM FRONT *(Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)*

NA

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. There is no charge for filing a change of address. The fee for filing a change of ownership or assignment or any modification of owner's name is specified in Section 97.175 of the regulations. *(See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)*

To avoid conflict with other variety names in use, the applicant must check the appropriate recognized authority. For example, for agricultural and vegetable crops, contact: Seed Branch, AMS, USDA, Room 213, Building 306, Beltsville Agricultural Research Center--East, Beltsville, MD 20705. Telephone: (301) 504-8089. http://www.ams.usda.gov/lsg/seed.htm

16a. Exhibit A – Origin and Breeding History of Variety

Carver (UF97102) came from a cross made in the greenhouse at Marianna, Florida in 1990. The female parent was a sisterline of 'Okrun', which has 'Florunner' as a parent and is similar to Florunner in phenotype. The male parent (NC3033) is a breeding line released by the North Carolina State University breeding program for its resistance to CBR and *S. rolfsii*, being a small seeded Virginia. Both parents are *Arachis hypogaea* ssp. *hypogaea* var. *hypogaea*.

Carver = UF 97102 = 90x7-1-5-1-b2-B
[OKFH15 x NC3033]

The cross was made to develop a medium maturity popular of material to select for resistance to white mold (*S. rolfsii*) and CBR (*Cylindrocladium crotalariae*) with good pod yields and grades for runner market-type. A pedigree selection program was followed in the F_1-F_5 under sprayed (leafspot), medium/high management production conditions. Limited pressure was present in the fields from *S. rolfsii* and/or CBR but no fungicides were used to help control these two diseases. Seed from two F_5 plants were bulked to initiate yield test in the field at Marianna in 1996. Tests were conducted at Marianna and Gainesville beginning in 1997 and continued through 2004. Plots and seed increases have been/are uniform in plants/pod/seed type being very uniform and stable in phenotype with no variants evident from the time of initial yield testsing.

Population size varied from about 120-30 plants for the F_2-F_5 and single plants were used to advance generation that ultimately resulted in Carver. Only seed from F_5 plants were bulked to produce Carver.

Carver is a runner market-type peanut with a prostrate to semi-prostrate growth habit. The branching, leaf size and color are normal but tend to be somewhat lighter green than Florunner. The center stem is prominent at commercial seeding rates. The seed are pink (testa) and rounded to somewhat elongated, being somewhat longer than Florunner.

References:

1) Banks, D. J., J. S. Kirby, and J. R. Sholar. 1989. Registration of 'Okrun' Peanut. Crop Sci. 29:1574.
2) Beute, M. F., J. C. Wynne, and D. A. Emery. 1976. Registration of NC3033 peanut germplasm. Crop Sci. 16:887.
3) Gorbet, Daniel W. 2003. Carver – A new medium maturity peanut cultivar. UF Agric. Expt. Stn., NFREC Res. Rpt. 03-5, 6 p.
4) Norden, A. J., R. W. Lipscomb, and W. A. Carver. 1969. Florunner, a new peanut variety. UF Agric. Expt. Stn. Circ. S-196.

16.b. Exhibit B – Novelty Statement

Carver is a runner market-type peanut with runner/prostrate growth habit. It is most similar to SunOleic 97R except that SunOleic 97R is much more susceptible to tomato spotted wilt virus (TSWV). Also, SunOleic 97R has "high oleic" oil chemistry where Carver has "normal" oil chemistry. Data on TSWV ratings at Marianna, using a 1-10 scale with 1 = no disease, Carver rated a 3.0 vs. 6.4 for SunOleic 97R (Table 1). Using a 1-4 scale (4 = resistant), Carver would rate about a 3.5 vs. 1.5 for SunOleic 97R. Data on oil chemistry for Florida samples (1999-2003) show Carver with about 56-57% oleic fatty acid (18:1) vs. 80±% for SunOleic 97R (Table 4).

Table 4. Oil chemistry data from Florida samples analyzed in University of Florida lab (1999-2003).

Entry/Year/Location	Oleic (18:1)	Linoleic (18:2)	Oil
		%	
Gainesville – 1999 (1)			
Carver	63.7	17.7	45.7
Georgia Green	59.6	20.4	48.5
Florunner	62.1	18.2	44.1
Gainesville – 2000 (3)			
Carver	56.3	23.6	48.4
Georgia Green	55.2	25.2	50.1
SunOleic 97R (2)	75.1	7.4	49.4
Florunner (1)	52.8	27.0	49.7
Gainesville - 2001 (3)			
Carver	58.1	22.9	47.2
Georgia Green	53.6	26.8	50.6
Florunner (2)	53.4	24.7	50.9
Gainesville - 2002 (2)			
Carver	60.8	20.2	
Georgia Green	52.9	24.1	
Florunner	54.3	26.6	
SunOleic 97R (1)	80.8	4.0	
Gainesville – 2003 (3)			
Carver	54.8	25.9	47.7
Georgia Green	55.3	25.6	50.9
SunOleic 97R (1)	82.9	2.4	48.8
Marianna – 1999 (3)			
Carver	58.4	22.2	47.9
Georgia Green	55.8	24.8	53.3
SunOleic 97R	79.9	3.1	49.8
Florunner (1)	57.5	21.7	49.6

Marianna – 2000 (2)			
Carver	53.3	26.0	47.1
Georgia Green	54.1	25.8	52.3
SunOleic 97R (1)	80.2	2.6	48.7
Florunner (1)	56.8	22.6	48.6
Marianna – 2001 (2)			
Carver	52.0	28.7	
Georgia Green (1)	52.3	28.6	
SunOleic 97R	81.7	2.4	
Marianna 2002 – (1)			
Carver	80.1	28.1	
Georgia Green	51.7	27.9	

Table 5. Data from inoculated white mold yield tests, Marianna (1998-2000).

Entry	Pod Yield (lbs/A)	% TSMK	% ELK	100-seed wt. (g)	Disease rating[1] A	B
Carver	3148	75.0	14.6	66.2	3.1	3.2
Georgia Green	2053	77.7	11.0	56.5	4.5	2.8
SunOleic 97R	1400	76.4	13.0	60.7	7.7	1.7

[1]Disease rating, A) 1-10 scale with 1 = no disease, and B) 4-1 scale with 4 = highly resistant.

Table 6. Seed chemistry and flavor data on Carver from Florida samples from commercial lab.

	Fatty Acids (%)					
Entry	16:0	18:1	18:2	Oil %	Sugar %	Flavor[1]
Carver	9.6	53.1	23.8	48.9	4.0	5.0
Georgia Green	9.7	51.5	26.6	53.0	3.5	5.0

[1]Flavor rated on 1-5 (5 = best).

16.c. Exhibit C – Objective Description of Variety

Carver is a runner (prostrate) peanut variety (*Arachis hypogaea* L.) with foliage color being medium green, similar to SunOleic 95R. Seed of Carver are plump, rounded to somewhat elongated with a pink testa and a 100-seed weight of 66± 2g. Pod yields of Carver have been about 19% greater than Georgia Green in Florida tests. Carver has good resistance to tomato spotted wilt virus (better than Georgia Green), with some resistance to *S. rolfsii* and CBR. Table 1 gives data on TSWV ratings for Carver vs. Florunner and Georgia Green in Florida Tests (1996-2001). Caraver rates as more resistant than Georgia Green to TSWV. With limited data on CBR, Carver rates somewhat more resistant than Georgia Green, with similar reaction for *S. rolfsii* reaction (see table 5).

Oil quality of Carver is normal (O/L = 2.6) with about 48% oil content in the seed, being similar to Florunner. Seed of Carver can be somewhat more elongated than Florunner and some other runner market-types.

FORM APPROVED: OMB NO. 40-R3822

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
~~LIVESTOCK, POULTRY, GRAIN & SEED DIVISION~~
BELTSVILLE, MARYLAND 20705

OBJECTIVE DESCRIPTION OF VARIETY
PEANUT (Arachis hypogaea)

NAME OF APPLICANT(S)
Florida Agricultural Experiment Station

ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code)
Office of Dean for Research
1022 McCarty Hall, University of Florida
P. O. Box 110200, Gainesville, FL 32611-0200

VARIETY NAME OR TEMPORARY DESIGNATION
Carver

FOR OFFICIAL USE ONLY
PVPO NUMBER
20030024

Place the appropriate number that describes the varietal character of this variety in the boxes below.
Place a zero in first box (e.g. [0][8][9] or [0][9]) when number is either 99 or less or 9 or less.

1. BOTANICAL TYPE:

[1] Flowering on the Main Stem: 1 = ABSENT 2 = PRESENT

[1] Branching Pattern: 1 = ALTERNATE – Pairs of vegetative & reproductive branches (Virginia) 3 = OTHER (*Specify*) _____
2 = SEQUENTIAL – Continuous reproductive branches (Valencia–Spanish) _____

2. PLANT:

[1] Habit: 1 = PROSTRATE (*Florunner*) 2 = DECUMBENT (*NC–5*) 3 = SEMI-ERECT (*Florispan*) 4 = ERECT (*Starr*)

[3] Branching: 1 = SPARSE (*Valencia*) 2 = MODERATE (*Starr*) 3 = PROFUSE (*Florunner*)

3. MATURITY:

[2] Region: 1=VIRGINIA, NORTH CAROLINA 2 = S.E. UNITED STATES 3=S.W.UNITED STATES 4=OTHER

[1][3][5] NUMBER OF DAYS TO MATURITY

[ ][0] NO. OF DAYS EARLIER THAN . . . . . [2]

[ ][ ] NO. OF DAYS LATER THAN . . . . . [ ]

[2] 1 = STARR 2 = FLORUNNER 3 = FLORIGIANT 4 = VIRGINIA 61R 5 = NC - 2 6 = NC - 5 7 = SOUTHEASTERN RUNNER 56-15 8 = OTHER (*Specify*) _____

4. LEAVES:

[2] COLOR AT 60 DAYS: (*Nickerson Color Designation*): 1 = LIGHT GREEN (10GY 6/9) 2 = MEDIUM GREEN (2.5G 5/9) 3 = DARK GREEN (5G 4/7) 4 = OTHER (*Specify*) _____

[6][3] MM. LEAFLET LENGTH (*Basal leaflet of the youngest fully opened leaf*)

[2][.][8] LEAFLET LENGTH/WIDTH RATIO

5. POD: (Average for 20 pods at maturity)

[3][1] MM. LENGTH

[1][3] MM. DIAMETER

[5][0][9][2] KG./HA. POD YIELD

[ ][ ][ ] % LESS THAN . . . . . [ ]

[ ][1][9] % MORE THAN . . . . . [8]

[ ] 1 = STARR 2 = FLORUNNER 3 = FLORIGIANT 4 = VIRGINIA 61R 5 = NC - 2 6 = NC - 5 7 = SOUTHEASTERN RUNNER 56-15 8 = OTHER (*Specify*) Georgia Green

[1][0] % FANCY SIZE: (*% riding 13.46 mm., 34/64 inch, spacing set on presizer roller*)

9

FORM LPGS-470-29 (8-80) (Formerly Form GR-470-29 (6-17-74) which may be used)

200300204

5. POD (Average for 20 pods at maturity):

[2] NUMBER OF SEEDS PER POD: 1 = 1 2 = 2 3 = 3 4 = 3–4 5 = 2–3–4

[2] CONSTRICTION: 1 = SHALLOW OR NONE (*Virginia 56R, Argentine*) 2 = MEDIUM (*Virginia 61R*) 3 = DEEP (*Starr*)

[1] SURFACE: 1 = GLABROUS (*Florunner*) 2 = PUBESCENT (*Florispan*)

[2] BEAK: 1 = ABSENT 2 = INCONSPICUOUS 3 = PRONOUNCED

6. SEED (Mature, cured but not aged):

[ ][5] COAT COLOR: 1 = WHITE (*Pearl*) 2 = CREAM 3 = TAN (*Starr*) 4 = BROWN 5 = PINK (*Florigiant*) 6 = RED 7 = PURPLE 8 = DARK PURPLE 9 = VARIGATED 10 = OTHER (*Specify*) _____

[1] COAT SURFACE: 1 = SMOOTH 2 = INDENTED [2] 1 = UNIFORM COLOR 2 = BLEMISHED

[4] SHAPE: 1 = SPHERIODAL (*Starr*) 2 = SHORT-BROAD (*Florunner*) 3 = ELONGATED-SLENDER (*Dixie Runner*) 4 = CYLINDRICAL-TAPERED ENDS 5 = CYLINDRICAL-BLUNT ENDS (*NC–2*) 6 = OTHER (*Specify*) _____

[1][7] MM. LENGTH [1][0] MM. WIDTH [6][6] GRAMS PER 100 SEED (*8% Moisture*)

7. DISEASE RESISTANCE: (0 = Not Tested, 1 = Susceptible, 2 = Resistant) Scale 1-4; 4=resistant RAD 2/25/05

3.0 [2]	SOUTHERN STEM ROT	[0]	RUST
[1]	EARLY LEAF SPOT	[0]	VIRUS X
[1]	SOUTHERN LEAF SPOT	[0]	MOSAIC
[0]	POD ROT COMPLEX	3.5 [2]	OTHER (*Specify*) Tomato Spotted Wilt Virus

8. INSECT RESISTANCE: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

[1]	THRIPS	[0]	BURROWING BUG
[0]	LEAF HOPPER	[1]	NEMATODE (*Specify species*)
[0]	SOUTHERN CORN ROOTWORM	[0]	LESSER CORNSTALK BORER
[0]	APHID	[ ]	OTHER (*Specify*) _____

9. COMPARISON OF SUBMITTED VARIETY WITH ONE OR MORE SIMILAR VARIETIES:

VARIETY	OIL* (%)	PROTEIN* (%)	OLEIC: * LINOLEIC ACID RATIO	IODINE* NUMBER	SHELLING (%)	SMK** (%)	ELK+. (%)	MAIN STEM HEIGHT (CM)
SUBMITTED	48.3	25.7	2.6	95	78	76	16	39
SIMILAR	48.9	25.6	2.3	96	78	77	18	38
NAME OF SIMILAR VARIETY	Florunner	SunOleic 97R	Florunner	Florunner	SunOleic 97R	SunOleic 95R	Georgia Green	SunOleic 97R

* *From Sound Mature Kernels* ** Sound Mature Kernels + Extra Large Kernels

10. INDICATE A VARIETY WHICH MOST CLOSELY RESEMBLES THAT SUBMITTED:

CHARACTER	VARIETY	CHARACTER	VARIETY
POD COLOR	Florunner	SEEDLING VIGOR	Florunner
SEED DORMANCY	Florunner	HULL THICKNESS	SunOleic 95R
SEED SIZE	Florunner	LEAF COLOR	SunOleic 95R

11. COMMENTS (Additional description or clarification — Such as: Relative disease reactions may be compared with standard varieties)

Carver has good resistance to tomato spotted wilt virus, with some resistance to S. rolfsii and CBR, all better than Georgia Green.

10

16d. Exhibit D - Additional Description of Variety

Carver is a medium maturity (135 ± 3 DAP) runner market-type peanut with excellent yield potential, excellent TSWV resistance, some resistance to *S. rolfsii* and CBR with normal oil chemistry.

Table 1 gives data on pod yield, grading factors and disease (TSWV) ratings for 40 Florida yield tests conducted at Marianna and Gainesville (1996-2001). These data show the pod yield advantage of Carver over Georgia Green and SunOleic 97R. Based on 100-seed weights, Carver has a larger/denser seed than Georgia Green, however ELK values are very similar. Carver shows better resistance to TSWV than Georgia Green.

Table 2 gives results from planting date tests at Marianna (1998-99), with April, May, and June plantings. TSWV is expected to be greatest at April and June plantings. Carver showed a clear advantage in pod yields and disease resistance over Georgia Green and SunOleic 97R.

Table 3 gives results from TSWV tests grown at Marianna, Florida and Tifton, Georgia (1998-2000). These tests were planted in early April under high disease pressure situations. Carver clearly had a yield and disease resistance advantage over Georgia Green, the resistant check.

Table 4 gives data on oil chemistry from Florida tests, conducted in University of Florida labs. These data were from no less than 10 samples (1999-2003). These results show that Carver has normal oil chemistry, being similar to Florunner.

Table 5 gives data from three yield tests inoculated with *S. rolfsii* (white mold fungus) at Marianna (1998-2000). Based on pod yields and disease ratings, Carver has good resistance to this disease.

Table 6 gives data on seed chemistry and flavor for 1999 crop samples. The seed chemistry from these tests were similar for Carver and Georgia Green, except Georgia Green has a higher oil content. Both had acceptable flavor.

Table 7 gives data on blanching studies from Florida grown samples from 1998-2000. The data on Carver appears to be acceptable but not as good as for C-99R or Georgia Green.

Table 8 gives data on seed sizes of Carver from Marianna samples grown in 1998 and 2000. These results indicate that Carver is more like Georgia Green than C-99R in seed size.

Table 1. Pod yield and grading data for Carver in Florida tests (1996-2001)[1].

Location/year Entry	Yield (lbs./A)	TSMK[1] %	ELK[2] %	100 seed wt. (g)	Disease[3] A	 B
Marianna – 1996 (1)[4]						
Carver	5489	78.1	7.1	64.5	4.0	3.0
Florunner	3761	80.1	16.2	59.2	7.3	1.8
Marianna – 1997 (2)						
Carver	3356	76.1	9.2	63.9	4.1	2.9
Florunner	2091	77.2	12.1	57.5	7.2	1.8
Marianna – 1998 (3)						
Carver	3505	75.1	12.4	64.9	2.5	3.5
Florunner	1641	76.8	13.0	59.2	6.7	2.1
Marianna – 1998 (3)						
Carver	3616	74.5	13.6	69.8	3.2	3.2
Georgia Green	2367	76.5	15.6	60.3	5.6	2.5
Marianna – 1999 (5)						
Carver	3859	76.6	8.9	64.3	2.7	3.4
Florunner/97R	2123	77.2	9.3	56.6	6.1	2.3
Georgia Green	3153	79.1	8.9	54.0	4.2	2.9
Marianna – 2000 (8)						
Carver	5067	77.5	17.8	70.6	2.7	3.4
Florunner/97R	3376	78.1	22.5	64.2	7.2	1.8
Georgia Green	4840	78.9	21.9	59.8	3.7	3.1
Marianna – 2001 (5)						
Carver	5586	76.4	22.5	68.4	2.7	3.4
Florunner/97R	3682	78.2	28.1	63.6	6.4	2.2
Georgia Green	4805	72.3	23.5	57.1	3.9	3.1
Marianna – 2001 (4)						
Carver	4729	73.5	15.8	59.7	2.6	3.4
Georgia Green	4126	78.5	15.7	55.1	4.4	2.8
Gainesville – 1997 (1)						
Carver	4683	79.4	23.3	69.6	1.5	3.8
Georgia Green	4441	78.8	31.9	63.6	2.0	3.7
Gainesville – 1998 (2)						
Carver	5433	74.0	35.4	76.8	1.5	3.8
Georgia Green	4562	73.9	33.1	64.8	2.0	3.7
Gainesville – 1999 (16)						
Carver	5244	77.1	29.3	74.1	1.7	3.8
Florunner/97R	4310	77.5	30.8	66.7	1.9	3.7
Georgia Green	4949	78.9	31.4	63.5	1.7	3.8

[1]TSMK = total sound mature kernels = seed that ride a 16/64th inch slotted screen.
[2]ELK = extra large kernels = seed that ride a 21.5/64th inch slotted screen.
[3]Disease = severity ratings for tomato spotted wilt virus, A) 1-10 scale, 1 = no disease and B) 4-1 scale, with 4 = highly resistant.
[4]Number in parentheses is total number of tests average for given data.

Table 2. Planting date test - Marianna (1998-1999).

Entry/Planting Date	Pod Yield (lbs/A)	TMSK %	ELK %	100-seed wt. (g)	Disease rating[1] A	B
April						
Georgia Green	2363	76.2	18.5	62.3	5.9	2.4
SunOleic 97R	1395	71.7	14.9	56.5	6.7	2.1
Carver	2758	69.7	10.7	65.3	4.0	3.0
May						
Georgia Green	3165	78.5	11.7	56.5	3.8	3.1
SunOleic 97R	2302	74.0	13.2	60.9	6.6	2.2
Carver	3637	75.0	8.0	63.6	2.8	3.4
June						
Georgia Green	3279	78.9	6.6	52.3	3.6	3.1
SunOleic 97R	2332	76.5	7.7	54.2	6.8	2.1
Carver	3509	74.4	3.4	60.7	2.2	3.6

[1]Disease rating, A) 1-10 scale with 1 = no disease, and B) 4-1 scale with 4 = highly resistant.

Table 3. Tomato spotted wilt studies in Florida and Georgia (1998-2000)[1].

	% Disease			Yield (kg/ha)		
Entry	GA	FL	Mean	GA	FL	Mean
1998						
Georgia Green	48.8	59.2	53.9	3940	4035	3988
Georgia Runner	80.8	80.4	80.6	3360	3236	3298
Carver	35.0	33.8	34.4	5529	4946	5237
1999						
Georgia Green	56.7	64.4	60.5	2352	1594	1973
GK 7	72.9	87.1	80.0	2278	834	1556
Carver	43.3	52.5	47.9	3430	2650	3040
2000						
Georgia Green	58.9	37.5	48.2	3451	4534	3993
GK 7	75.4	90.8	83.1	2280	1967	2124
Carver	28.1	16.3	22.2	4521	5406	4964

[1]Data from Dr. Albert Culbreath, University of Georgia, Tifton.

Table 7. Blanching data for Carver (1999-2000)[1].

Entry	Splits	Whole	Not	Partial
1998		%		
Carver	9.0	79.0	4.5	5.0
Georgia Green	11.5	82.0	1.0	3.0
C-99R	9.5	83.5	1.0	3.5
1999				
Carver	2.5	76.5	8.0	10.5
Georgia Green	5.0	83.0	5.0	4.5
C-99R	3.0	84.0	4.0	6.5
2000				
Carver	4.0	77.5	11.0	6.5
Georgia Green	8.0	82.0	5.0	4.5
C-99R	6.0	86.0	2.0	3.0

[1]Data from Walt Mozingo, VPI, Suffolk, VA.

Table 8. Seed sizing distribution for Carver (1998-2000).

	Percent riding screen size						
Entry	21/64"	18/64"	16/64"	14/64"	SS	OK	Meat
2000			%				
Carver	24.7	43.9	4.6	1.1	4.5	0.9	79.7
Georgia Green	35.1	34.4	3.7	0.8	2.7	0.5	77.2
1998							
Carver	14.2	42.9	10.4	3.7	1.8	3.9	76.9
Georgia Green	52.0	15.2	4.0	1.8	1.4	2.0	76.4

Table 5. Data from inoculated white mold yield tests, Marianna (1998-2000).

Entry	Pod Yield (lbs/A)	% TSMK	% ELK	100-seed wt. (g)	Disease rating* (1-10)
Carver	3148	75.0	14.6	66.2	3.1
Georgia Green	2053	77.7	11.0	56.5	4.5
SunOleic 97R	1400	76.4	13.0	60.7	7.7

Table 6. Seed chemistry and flavor data on Carver from Florida samples.

	Fatty Acids (%)			%	%	
Entry	16:0	18:1	18:2	Oil	Sugar	Flavor*
Carver	9.6	53.1	23.8	48.9	4.0	5.0
Georgia Green	9.7	51.5	26.6	53.0	3.5	5.0

*Flavor rated on 1-5 (5 = best).

Table 7. Blanching data for Carver (1999-2000).

Entry	Splits	Whole	Not	Partial
		%		
1998				
Carver	9.0	79.0	4.5	5.0
Georgia Green	11.5	82.0	1.0	3.0
C-99R	9.5	83.5	1.0	3.5
1999				
Carver	2.5	76.5	8.0	10.5
Georgia Green	5.0	83.0	5.0	4.5
C-99R	3.0	84.0	4.0	6.5
2000				
Carver	4.0	77.5	11.0	6.5
Georgia Green	8.0	82.0	5.0	4.5
C-99R	6.0	86.0	2.0	3.0

Table 8. Seed sizing distribution for Carver (1998-2000).

	Percent riding screen size						
Entry	21/64"	18/64"	16/64"	14/64"	SS	OK	Meat
	%						
2000							
Carver	24.7	43.9	4.6	1.1	4.5	0.9	79.7
Georgia Green	35.1	34.4	3.7	0.8	2.7	0.5	77.2
1998							
Carver	14.2	42.9	10.4	3.7	1.8	3.9	76.9
Georgia Green	52.0	15.2	4.0	1.8	1.4	2.0	76.4

16.e. Ownership Statement

Carver originates from a cross made in the greenhouse at the Marianna NFREC in 1990 by D. W. Gorbet. All selections were made under sprayed (leafspot) management programs with medium to high management. A pedigree selection program was followed and seed from two F_5 plants were bulked to initiate yield tests at Marianna in 1996. UF97102 was tested at Marianna and Gainesville in 1997. UF97102 was approved for release by the University of Florida Agricultural Experiment Station (FAES) in 2002 as a new runner market-type peanut variety, named Carver.

Florida Foundation Seed Producers, Inc. (FFSP) is the designated agent for FAES and authorized to produce and market breeder and foundation seed of Carver. Only companies with approved contracts with FFSP are authorized to produce and sell seed of Carver.

Carver was developed by FAES scientist (breeder). By agreement between the breeder and FAES, this invention belongs to FAES and all rights, access, and use of this invention shall be in accordance to FAES policy.

REPRODUCE LOCALLY. *Include form number and date on all reproductions.* FORM APPROVED - OMB NO. 0581-0055 EXPIRES: 12-31-96

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY DIVISION - PLANT VARIETY PROTECTION OFFICE

EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S)

Florida Agricultural Experiment Station
~~University of Florida/IFAS~~

RAD 5/6/05

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER: UF97102

3. VARIETY NAME: Carver

4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)*

Office of Dean for Research
1022 McCarty Hall, University of Florida
P. O. Box 110200
Gainesville, FL 32611-0200

5. TELEPHONE *(include area code)*: 352-392-1784

6. FAX *(include area code)*: 352-392-4965

7. PVPO NUMBER: 200300204

8. Does the applicant own all rights to the variety? *Mark an "X" in appropriate block.* If no, please explain. [X] YES [ ] NO

9. Is the applicant (individual or company) a U.S. national or U.S. based company? [X] YES [ ] NO
If no, give name of country _____

10. Is the applicant the original breeder? If no, please answer the following: [X] YES [ ] NO

a. If original rights to variety were owned by individual(s):
Is (are) the original breeder(s) a U.S. national(s)? If no, give name of country _____

[X] YES [ ] NO

b. If original rights to variety were owned by a company:
Is the original breeder(s) U.S. based company? If no, give name of country _____

11. Additional explantion on ownership *(If needed, use reverse for extra space):*

D. W. Gorbet (Professor) - peanut breeder for Florida Agricultural Experiment Station

PLEASE NOTE:

Plant variety protection can be afforded only to owners (not licensees) who meet one of the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.

2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.

3. If the applicant is an owner who is not the original breeder, both the original breeder and the applicant must meet one of the above criteria.

The original breeder may be the individual or company who directed final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definition.